

**03-EDP-062**

What is Claimed Is:

1. A circuit breaker comprising:
  - a housing;
  - a pair of contacts comprising a fixed contact and a movable contact;
  - an operating member pivotally mounted for movement between a closed position and an open position and having a handle extending outside the housing;
  - a contact arm carrying the movable contact at a first end and coupled to the operating member at a second end;
  - a trip mechanism comprising a thermal/magnetic trip device having a tripped state and an untripped state;
  - a cradle pivotally mounted for movement between a latched position in which the cradle is retained by the trip mechanism in the untripped state, and an unlatched position to which the cradle moves when the trip mechanism goes to the tripped state;
  - an operating spring between the cradle and the contact arm biasing the contact arm to a closed state in which the movable contact engages the fixed contact when the operating member is in the closed state and the cradle is latched, and otherwise biasing the contact arm to an open state in which the pair of contacts are separated; and
  - a trip indicator comprising:
    - an indicator window in the housing;
    - a trip indicating member carrying a trip indicia; and
    - an indicator mount mounting the trip indicating member for movement between a tripped position in which the trip indicia is visible through the indicator window and an untripped position in which the trip indicia is not visible through the indicator window;
  - the cradle having an engagement member engaging the trip indicating member and moving the trip indicating member to the tripped position as the cradle moves to the unlatched position; and

the operating member having a reset member engaging and moving the trip indicating member to the untripped position as the operating member is moved to the closed position.

2. The circuit breaker of Claim 1, wherein the trip indicator further comprises an indicator spring biasing the trip indicating member to the tripped position and to the untripped position.

3. The circuit breaker of Claim 2, wherein the housing has a cam surface laterally adjacent to the trip indicating member against which the indicator spring biases the trip indicating member during movement between the tripped and untripped positions of the trip indicating member.

4. The circuit breaker of Claim 3, wherein the cam surface protrudes laterally toward the trip indicating member at an intermediate point in movement of the trip indicating member and recedes laterally toward both the tripped position and the untripped position of the trip indicating member.

5. The circuit breaker of Claim 4, wherein the indicator mount is a pivot mount defining a pivot axis about which the trip indicating member reciprocally pivots between the tripped position and the untripped position.

6. The circuit breaker of Claim 5, wherein the indicator spring is a leaf spring mounted by the pivot mount and bearing laterally against the trip indicating member to bias the trip indicating member along the pivot axis against the cam surface.

7. The circuit breaker of Claim 6, wherein the contact arm blows open to the open state before the trip mechanism moves to the tripped state and, therefore, while the cradle remains in the latched position in response to a short circuit, the pivot mount comprising a non-circular opening sized to allow the trip indicating member to be displaced transverse to the pivot axis when the operating member is moved to the open position.

8. The circuit breaker of Claim 7, wherein the trip indicator further comprises a blow open spring compliantly opposing displacement of the trip indicating member transverse to the pivot axis.

9. The circuit breaker of Claim 8, wherein the blow open spring is formed integrally with the leaf spring.

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10. The circuit breaker of Claim 9, wherein the pivot mount comprises a pivot pin and the trip indicating member has the non-circular opening through which the pivot pin extends, and the indicator spring has a spring hub with a circular opening sized to remain centered on the pivot pin, the leaf spring extending from the spring hub along a lateral face of the trip indicating member and the blow open spring extending from the spring hub with a cantilevered portion extending generally along the pivot axis and bearing against an axially extending edge of the trip indicating member.

11. The circuit breaker of Claim 10, wherein the cradle has a reset spring returning the cradle to the latched position following a trip.

12. The circuit breaker of Claim 4, wherein the cradle has a reset spring returning the cradle to the latched position following a trip.

13. The circuit breaker of Claim 1, wherein the cradle has a reset spring returning the cradle to the latched position following a trip.

14. The circuit breaker of Claim 13, wherein the indicator mount is a pivot mount defining a pivot axis about which the trip indicating member reciprocally pivots between the tripped position and the untripped position.

15. The circuit breaker of Claim 14, wherein the contact arm blows open to the open state before the trip mechanism moves to the tripped state, and therefore, while the cradle remains in the latched position in response to a short circuit, the pivot mount comprising a non-circular opening sized to allow the trip indicating member to be displaced transversely to the pivot axis when the operating member is moved to the open position following the short circuit.

16. The circuit breaker of Claim 15, wherein the trip indicator further includes a blow open spring compliantly opposing displacement of the trip indicating member transversely to the pivot axis.

17. The circuit breaker of Claim 1, wherein the cradle comprises a sheet member with the engagement member formed by a laterally extending flange.

18. The circuit breaker of Claim 17, wherein the trip indicating member has a finger engaged by the laterally extending flange as the cradle moves to the unlatched position.

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19. The circuit breaker of Claim 18, wherein the trip indicating member has a lateral projection engaged by the reset member of the operating member as the operating member is moved from the open position to the closed position.

20. The circuit breaker of Claim 18, wherein the trip indicating member further comprises an indicator spring biasing the trip indicating member to the tripped position and to the untripped position.

21. The circuit breaker of Claim 20 wherein the indicator mount comprises a frame on which the operating member is pivotally mounted and on which the trip indicating member is secured by the indicator spring.